

ILLINOIS COMMERCE COMMISSION

DOCKET No. 13-0476

SURREBUTTAL TESTIMONY

OF

RYAN K. SCHONHOFF

Submitted on Behalf Of

AMEREN ILLINOIS COMPANY

d/b/a Ameren Illinois

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7 **I. INTRODUCTION**

8 **A. Witness Identification**

9 **Q. Please state your name and business address.**

10 A. My name is Ryan K. Schonhoff and my business address is One Ameren Plaza, 1901
11 Chouteau Avenue, St. Louis, Missouri 63103.

12 **Q. Are you the same Ryan K. Schonhoff who sponsored direct and rebuttal testimony**
13 **in this proceeding?**

14 A. Yes, I am.

15 **B. Purpose, Scope and Identification of Exhibits**

16 **Q. What is the purpose of your surrebuttal testimony?**

17 A. The purpose of my surrebuttal testimony is to respond to certain arguments raised in the
18 rebuttal testimonies of Mr. Philip Rukosuev on behalf of the Illinois Commerce Commission
19 Staff (Staff), Mr. Scott Rubin on behalf to the People of the State of Illinois (AG), Mr. Jeff
20 Adkisson on behalf of the Grain and Feed Association (GFA), and Mr. Robert Stephens and Ms.
21 Amanda Alderson on behalf of the Illinois Industrial Energy Consumers (IIEC).

22 **Q. Please generally describe your testimony and conclusions.**

23 A. In this testimony I respond to Staff witness Mr. Rukosuev's recommendation that Primary
24 Distribution Lines be allocated using a Coincident Peak (CP) method and I provide further
25 support for the Company's Non-Coincident Peak (NCP) allocation proposal. I continue to
26 believe that the NCP method more appropriately reflects cost-causation principles, in that it more
27 appropriately allocates costs according to how those costs are incurred in practice and as
28 influenced by the load diversity of local Primary Distribution circuits. I also continue to argue
29 that the NCP method is consistent with the practices of other electric utility Companies, and is
30 recognized as an appropriate method in NARUC's Cost Allocation Manual.

31 In addition, I respond to IIEC witness Mr. Stephens' recommendation that the Company
32 alter the way in which it allocates single-phase facility costs to secondary voltage customers. I
33 recommend the Commission reject Mr. Stephens' recommendation that the Company assign 10%
34 to 20% of the Primary Distribution system costs to the secondary function. This issue involves a
35 complex examination of system assets, which has not been conducted. For this reason, the
36 record simply does not support the specific percentages that Mr. Stephens advocates. AIC
37 remains neutral with respect to conducting future workshops on the topic.

38 I also respond to Mr. Rubin's recommendation that the Company's non-meter AMI-
39 related communication network and IT assets be allocated using a labor-based allocator. I
40 continue to believe that cost allocation for these assets should follow the cost allocation of the
41 AMI meters (cost causation principle), since the communications network and IT plant assets are
42 necessary for the AMI meters to be fully functional.

Finally, I further confirm an agreement with the GFA regarding the implementation of a new temperature sensitive, DS-6 class, and also confirm that the IIEC no longer harbors concerns with the Company's proposed use of the CUST370A allocator.

Q. Are you sponsoring any exhibits with your surrebuttal testimony?

A. Yes. I am sponsoring the following exhibit:

- Ameren Exhibit 8.1: Distribution System Illustration

II. RESPONSE TO STAFF WITNESS RUKOSUEV

Q. Have you reviewed the rebuttal testimony of Staff witness Mr. Rukosuev, ICC Staff Ex. 4.0?

A. Yes.

Q. What issues does Mr. Rukosuev address in his rebuttal, to which you are responding?

A. Mr. Rukosuev addresses two issues to which I respond: 1) Functionalization of Overhead Distribution Lines; and 2) AIC's proposed Primary Distribution Line Allocator.

Q. Has Mr. Rukosuev accepted any of AIC's proposals in his rebuttal?

A. Yes. Mr. Rukosuev states that based on information in my rebuttal testimony, he now agrees with the Company's proposed functionalization of overhead lines and recommends the Commission adopt the change. As a result, AIC no longer considers this a contested issue. I address the remaining contested issue between myself and Mr. Rukosuev below.

A. Primary Distribution Line Cost Allocation Method (CP vs. NCP)

Q. Can you provide a brief summary of the issue involving the Primary Distribution Line Allocator?

65 A. Yes. The debate is over which of the two allocation methods proposed by parties in this
66 proceeding should be used to allocate primary distribution lines. The Company is proposing to
67 allocate these facilities using the NCP method, while Staff contends that it is more appropriate to
68 use the CP method. The evidence submitted in this docket demonstrates that the NCP method is
69 a more appropriate allocator for these costs and better advances the Commission's goal of setting
70 cost-based rates. The record on this topic is much more complete than the evidence presented in
71 Dockets 09-0306/0308, when the use of an NCP allocator was debated for *both* substations and
72 primary distribution lines in conjunction.

73 **Q. What is your major concern with Mr. Rukosuev's proposal?**

74 A. I agree with Mr. Rukosuev that the issue turns on which allocation method, the CP
75 method or the NCP method, more accurately reflects cost causation for primary distribution
76 lines. But I disagree with his conclusion. Mr. Rukosuev does not appropriately distinguish
77 between the different voltage levels or address the functional differences of these voltage levels
78 within the distribution system. AIC's cost allocation methodology does, however, recognize
79 these functional differences in facilities between primary distribution lines, substations and high
80 voltage distribution lines. A key characteristic that is different between these voltage levels of
81 facilities is load diversity.

82 Load diversity is simply a way of quantifying the variations in customer usage between
83 different times of the day, week, month, or year. Load diversity generally allows a utility to
84 design system facilities with far less capacity than the sum of all customers' individual peak
85 demands served by the utility. This is evident in the fact that AIC has much higher total capacity
86 on its primary level distribution system than on the overall transmission system, both of which
87 are required and constructed to serve all of AIC's customers.

AIC's proposal recognizes this difference by using the NCP method for primary distribution lines, which is generally recognized as a superior allocation method for these facilities, which generally serve loads with relatively low load diversity. AIC continues to advocate use of the CP method for substations and high voltage facilities, which generally serve loads having much higher load diversity. Mr. Rukosuev would prefer to utilize the CP allocation method for the primary distribution lines. He is in agreement with use of the CP allocation method for the high voltage distribution system and substations. His proposal effectively infers that the local primary distribution circuits contain the same level of load diversity as the overall transmission system. This is not true, as I will explain.

Q. On pages 9-10 of ICC Staff Exhibit 4.0, Mr. Rukosuev states that your testimony muddies the waters, does not provide sufficient cost justification, and tends to confuse matters, with respect to the CP vs. NCP issue. He states that the goal of his rebuttal testimony is to clarify the issue. How do you respond?

A. I disagree that his testimony clarifies the issue. My rebuttal provided the additional information¹ and insight needed for the Commission to revisit its findings in Dockets 09-0306 (cons.) regarding the allocation of primary distribution line costs, as separate from any findings associated with substations, which can be distinguished from primary distribution lines from a load diversity perspective. IIEC witness Mr. Stephens also disagrees with Mr. Rukosuev's perspective on this topic, finds the information provided in my rebuttal testimony to be helpful (IIEC Ex. 3.0, ll. 140-142) to the Commission, and affirms his support for AIC's proposal. My surrebuttal testimony further demonstrates why the CP method proposed by Mr. Rukosuev does

¹ In rebuttal, AIC provided additional information including EEI surveys and specific cost details regarding DS-5 and DS-6 classes.

not adhere to principles of cost causation and why his arguments against use of the NCP method are not justified. Mr. Rukosuev's "clarifications" are a restatement of his prior arguments and culminate in an unsupported conclusion that the single hour system CP demand, which is primarily used to allocate the costs of higher voltage lines, is the appropriate allocation method for primary distribution lines as well. In contrast, the additional information provided in my rebuttal testimony and this surrebuttal testimony introduces facts and expert analysis not yet presented in previous proceedings. This evidence exposes the flaws Mr. Rukosuev's proposal, and the superiority of AIC's proposal.

Q. What flaws exist in Mr. Rukosuev's proposal?

A. The foremost weakness in Mr. Rukosuev's proposal is that he makes very general statements that the CP demand allocator is more reflective of cost causation. These are conclusory and unsupported assertions and do not demonstrate why the CP method should be used for allocating primary distribution lines. This notion is problematic because an allocator can provide superior cost causation when used to allocate one type of facility, but inferior cost causation for another facility type.

Take for example the ENERGY² allocator, used to allocate energy-related costs. When allocating Electric Distribution Tax (EDT) or fuel costs³, the ENERGY allocator adheres to cost causation because the amount of fuel required or the amount of EDT levied on AIC is directly related to the kWh's consumed by each customer class. However, allocating fixed distribution plant investments such as distribution lines or substations using the same ENERGY allocator is inferior, and not reflective of cost causation.

² kWh's delivered to each rate class

³ Fuel is not a jurisdictional cost for AIC; this cost item is illustrative only.

The same logic is true when deciding on allocation factors to use for the different voltage levels of electric plant, e.g. high voltage distribution, substations, primary distribution lines, line transformers, secondary distribution lines, etc. An allocation factor that is appropriate and follows cost causation for one category or level of distribution plant (i.e., the CP method for substation assets) is not necessarily appropriate for another type of distribution plant, simply because they are both "distribution plant". This is made clear by the fact that the Commission currently approves the NCP method for secondary distribution lines while approving the CP method for substations, high voltage distribution lines, etc. Mr. Rukosuev is defending the validity of the CP method as the superior method for cost causation in the distribution system, without recognizing that while it may be superior for certain portions of the distribution system, it is inferior for other portions of the system.

Q. Can you illustrate the different voltage levels of distribution plant to clarify the technical details of the distribution system?

A. Yes. Ameren Exhibit 8.1 illustrates, on a small scale, the various voltage levels of distribution plant utilized by AIC. The source of electricity in this illustration is a "Transmission Line" (+100kV), which delivers energy to the distribution system and ultimately to all customers served. The voltage is stepped down from transmission voltage (+100kV) to high voltage distribution levels (69 kV) through the "High Voltage Substation." This "High Voltage Substation" can have multiple feeder circuits operated at 69kV.⁴ These high voltage feeder circuits transmit electricity over shorter distances than the transmission lines, but still far enough to require higher voltage levels than the lower voltage distribution system. These high voltage

⁴ The illustration shows only one for simplicity.

lines ultimately feed this lower voltage distribution system via distribution substations (like the “Main Street” Substation in Ameren Ex. 8.1), which provide for electricity at reduced voltage levels suitable to operate the primary distribution system (12kV). The primary distribution system (primary distribution lines) provides the final stage of electric distribution. These primary distribution lines are what customers typically see running along city streets or through residential subdivisions. Although these primary distribution lines serve some larger customers directly, as depicted with the DS-6 customer in the illustration, the majority of individual customers are served from an even lower level of the distribution system consisting of downstream secondary distribution lines and line transformers. While simplistic, this illustration is instructive of the configuration and operation of the entire distribution system. I will now focus in greater detail on the “Main Street Distribution Substation” and the lower level facilities for the remaining explanation of the illustration.

Distribution Substations often have multiple primary distribution lines emanating from them, as illustrated in Ameren Exhibit 8.1. These primary distribution lines, which are the focus of debate in this proceeding, have line transformers attached to them, identified in the illustration as light green triangles, which further step down the voltage to a level useful for retail customers (<600V). The illustration also shows secondary distribution lines, which typically run parallel to the primary distribution lines and are identifiable in the illustration as dark blue lines. These secondary distribution lines are used to serve a small group of residential (DS-1) or small commercial (DS-2) customers or a combination of both from a single line transformer. These line transformers and secondary distribution lines are the “last leg” of AIC’s distribution system, before connecting to individual customer facilities. The individual facilities include service lines and meters (not show in the illustration).

174 **Q. Why is it useful to illustrate these details of the distribution system?**

175 A. It is important for purposes of this discussion, to realize that the various levels of the
176 distribution system are designed for very different purposes, and the level of load diversity
177 inherent within each type of facility is distinctly different. The transmission line in my example
178 serves all customers, while the secondary lines and lines transformers in the illustration serve
179 only a small fraction of all customers on the distribution system. As you examine the illustration
180 from top to bottom, you begin to see that facilities as they get closer to the individual customers
181 serve fewer and fewer customers. This fact is important to remember when discussing load
182 diversity, because smaller groups of customer will have different load characteristics than the
183 system as a whole.

184 **Q. What else is included in your illustration show?**

185 A. The illustration overlays a load diversity spectrum and the allocation factor spectrum that
186 I described in my rebuttal testimony. On the high side of the spectrum is the CP Method, which
187 is generally used to capture the highest level of load diversity among the rate classes. On the low
188 side of the spectrum is the $\sum\text{NCP}^5$ (not to be confused with NCP), which is generally used to
189 capture the lowest levels of load diversity among rate classes. The NCP Method advocated by
190 AIC correlates to a level of load diversity in-between these two extremes.

191 In parenthesis after the label for each type or voltage level of facility, I have added the
192 Company's proposed allocation method (CP, NCP, or $\sum\text{NCP}$). As you can see, the Company is
193 proposing to utilize Mr. Rukosuev's CP Method for all but the very last portions of the
194 distribution system, namely primary distribution lines and secondary distribution lines. As

⁵ Sum of individual customer peak demands

mentioned previously, the Commission already accepts the NCP method for purposes of allocating secondary distribution lines.

As I stated in rebuttal testimony previously, AIC is not able to develop an allocation factor to perfectly match the exact load diversity on each level of the distribution system given data availability and the practical complexities of such analysis.⁶ Instead, the Company must choose between available methods (1CP, 12CP, 1NCP, 12NCP, Σ NCP, etc.) to best match cost causation for each unique component or voltage level of the distribution system. It is useful to review the illustration to see where each of the various voltage levels of distribution plant falls on this diversity level spectrum. It is also important to realize that the load diversity spectrum described above correlates with the allocation methods available to the Company (listed above). See the illustration for additional detail around this correlation.

Q. Can you explain the interactions between the customers and customer classes within the illustration?

A. Yes. Again, referring to Ameren Exhibit 8.1, the illustration contains four rate classes used by AIC: DS-1, DS-2, DS-5, and DS-6.⁷ The “Main Street” distribution substation serves these customer classes from three primary distribution lines. Each of these primary distribution lines represents a circuit that peaks during a different season of the year: winter, fall, and summer. To be clear, all of these seasonally-peaking circuits exist in AICs distribution system.

⁶ This would include the factor or analysis mentioned in my rebuttal testimony, and referenced by IIEC witness Mr. Stephens.

⁷ I have not included DS-3 and DS-4 classes for purposes of this illustration because they are irrelevant to my testimony and would unnecessarily complicate the illustration.

The first primary distribution line (to the left) serves a residential subdivision, comprised mostly of residential electric space heating customers. Public street lighting is available, so this primary line serves two classes (DS-1 and DS-5). This line is winter peaking.

The second primary distribution line (towards the bottom/center) reflects a line that extends from a distribution substation to a remote rural area that serves a single agricultural customer whose primary use of electricity is related to grain elevator operations (DS-6 class). This line is fall peaking.

The third primary distribution line (to the right) serves a combination of residential, small commercial and public street lights (DS-1, DS-2, and DS-5 classes). This line is summer peaking.

Q. How does load diversity play a factor in this discussion?

A. As previously described, load diversity is simply a way of quantifying the variations in customer usage and generally allows a utility to design system facilities with far less capacity than the sum of all customers' individual peak demands served by the utility. Choosing different allocation methods (CP, NCP, or \sum NCP) for different levels of the distribution system recognizes these differences in load diversity and provides for better cost causation. If one were to look at the secondary distribution lines (dark blue) or line transformers (green triangles), there is relatively low load diversity as compared to the rest of the upstream system due to the small number of customers served from these facilities. On the other hand, if you look at the transmission line, it contains the highest level of load diversity among the facilities because it serves all customers. Moving from top to bottom in my illustration, less and less load diversity is present on the system components until you reach the individual customer, which has no load diversity.

i. **Concerns Specific to the DS-5 Street Lighting Class**

Q. In your illustration, you show a primary line serving a residential subdivision consisting mostly of residential electric space heat customers (DS-1) and street lighting (DS-5). Please explain this scenario.

A. This situation is most common in the southern region of AIC's territory where there is a higher prevalence of residential electric space heating load and a lower prevalence of natural gas service available. The peak demand on this primary distribution line, and others lines like it, occurs during the winter months during nighttime hours when the outside temperature is lowest.

Q. How do you know this situation exists within the AIC service territory?

A. Based on discussions with AIC distribution planners on this matter, it is my understanding that there are large amounts of electric heating load on the primary distribution circuits in that area of the service territory. It is my understanding from those discussions that approximately 162 primary distribution lines out of approximately AIC's 2,100 total primary distribution lines peak during winter or fall months, which is revealing considering Mr. Rukosuev's assumption that primary distribution lines are all summer peaking.

Q. What does this new information mean with respect to choosing between an NCP method and a CP method?

A. Mr. Rukosuev's proposal contains an embedded, or maybe even express, assumption that the DS-5 lighting class doesn't contribute to peak demands on primary distribution lines. This is not correct. Mr. Rukosuev's proposed CP method would allocate zero costs of the primary distribution lines to the lighting class, when there is evidence that the lighting class does contribute to the local peak demand on primary distribution lines. My proposal to utilize an NCP

method, however, allocates at least a small portion of the primary distribution line costs to the DS-5 class. Specifically, the NCP method allocates 1.1%, 0.5% and 1.4% of the primary distribution line plant costs to the DS-5 class for RZ I, RZ II, and RZ III, respectively. While it is not currently possible to determine the exact portion of the DS-5 class demand that is contributing to these winter peaking primary distribution lines, it is evident that the number is greater than zero, as Mr. Rukosuev would claim.

Q. Mr. Rukosuev states the following “The lighting class provides a useful example of the issue because its peak demands generally do not coincide with peak demands for the system as a whole. It would be reasonable to assume that the peak demands for the lighting class do not play the same role in shaping primary line investments as the collective demands for all classes at the time of system peak demands. Thus, CP demands, rather than NCP demands, provide the most reasonable basis for allocating these costs.” (ICC Staff Ex. 4.0, p. 11.) How do you respond?

A. His assumption is correct for purposes of allocating high voltage distribution equipment, including +100kV distribution lines. But it is not valid for purposes of allocating primary distribution lines. As this discussion and Ameren Exhibit 8.1 illustrate, the DS-5 lighting class requires the facilities, and in some cases contribute to the local system peak demand on the primary lines; thus, from a cost causation standpoint, it is appropriate for them to be allocated at least a small portion of the costs. Mr. Rukosuev is essentially saying that because lighting demands don’t coincide with peak demand of the overall system, then it would be reasonable to assume that the lighting class’s demands also don’t coincide with local primary distribution line demands. To the contrary, AIC’s DS-5 class does contribute to the peak loads experienced on

280 the primary distribution system, even though those DS-5 customers do not contribute to the
281 overall system peak demand on the transmission system.

282 **Q. Mr. Rukosuev states on page 12 that "the lighting class receives no credit in the**
283 **ECOSS for its off-peak demands, despite the benefits to the system that result." (ICC Staff**
284 **Ex. 4.0, p. 12.) Do you agree?**

285 A. No. I agree with Mr. Rukosuev that there is little coincident demand from the DS-5
286 lighting class at the time of the overall system peak, which occurs in the summer. AIC's ECOSS
287 accommodates this fact by allocating zero costs of +100kV lines, high voltage distribution lines
288 and substations to the DS-5 lighting class (under the CP method). Mr. Rukosuev would prefer to
289 also allocate zero costs of the primary distribution lines to the DS-5 class, even though they do
290 contribute, albeit a small amount, to peak demands on the primary distribution system. These
291 costs would be borne by all the remaining rate classes under Mr. Rukosuev's proposal.

292 **Q. Do you agree with Mr. Rukosuev's argument that any cost benefits the lighting class**
293 **brings to AIC's system are not recognized under the Company's proposed NCP allocation**
294 **methodology?**

295 A. No. The information I have provided above proves that Mr. Rukosuev is not correct.

296 **Q. How do you respond to the example presented on pages 12 and 13 of Mr.**
297 **Rukosuev's rebuttal testimony?**

298 A. Mr. Rukosuev's example is overly generic and hard to follow. He portrays two
299 ratepayers as existing in two "areas" A and B, which I assume are geographic in nature. His
300 example also fails to give critical explanation of how the ratepayers are electrically connected to
301 the system, and by what type of facilities. He concludes the example by stating that if ratepayer

in area "B" instead used energy during daylight hours⁸ instead of nighttime hours, it would not require the distribution system to be built differently. Without knowing the magnitude of the demand of each of these ratepayers or the other ratepayers demand on existing facilities, it would be hard to determine whether Mr. Rukosuev's statement is correct. Hypotheticals aside, the sum of all primary distribution line circuit peak demands vastly exceed the system coincident peak. The system coincident peak (CP method) does not drive primary distribution line capacity needs. Instead, local primary distribution line demands drive primary distribution line capacity needs. The industry recognizes this dynamic, and no other jurisdiction in the country, that we are aware of, allocates primary distribution line based on system coincident peak (CP method).

Q. Mr. Rukosuev presents in his rebuttal testimony two examples of alleged "problems" with the NCP method: (1) an argument that NCP has nothing to do with regional peak demands and (2) that intra-class diversity has nothing to do with cost causation. How do you respond to the first "problem"?

A. The CP method suffers from the same flaw. As a result, this factor is not determinative in any debate involving the adoption of the CP versus the NCP method.

Q. How do you respond to the second "problem"?

A. I disagree with Mr. Rukosuev's contention that the NCP method "has nothing to do with cost causation." I have explained how the NCP method more appropriately matches the load diversity associated with primary distribution lines, when compared to the CP method.

⁸ I assume his example of daylight hours is synonymous with the morning and the evening is synonymous with the remaining hours; his example is unclear.

321 **Q. In concluding his remarks about the DS-5 class, Mr. Rukosuev states that AIC has**
322 **ignored the fact that street lights do not cause AIC to incur distribution system expansion**
323 **costs because street lights do not use electricity during the system peak. He goes on to say**
324 **that very little distribution equipment should be allocated to the street lights. How do you**
325 **respond?**

326 A. I am baffled by these concluding statements. I agree with his assessment that there
327 should be very little distribution costs allocated to the DS-5 class, and, in fact, AIC has allocated
328 a very small amount of primary distribution line costs. AIC has also allocated zero costs of the
329 high voltage distribution system and substations, which is consistent with Mr. Rukosuev's
330 arguments and concerns. AIC's use of the NCP method for primary distribution lines allocates
331 less than 1.5% of the total primary distribution line costs to the DS-5 class for each of the three
332 Rate Zones, where Mr. Rukosuev's CP method allocates 0.0%. Mr. Rukosuev concludes that
333 allocating less than 1.5% of the cost of primary distribution lines drastically overstates costs to
334 the class, and 0.0% is more appropriate for a class that utilizes primary distribution lines. I
335 understand Mr. Rukosuev's observation that the lighting class has virtually no within-class
336 diversity, but that is not a valid argument for completely eliminating an allocation of costs of
337 facilities that are required by the DS-5 class to receive service.

338 **Q. Would AIC be willing to accept a modified or hybrid allocation method, different**
339 **from one proposed by AIC or Staff thus far in this proceeding, in an attempt to maintain**
340 **proper cost causation principles and protect the remaining rate classes from the**
341 **inappropriate cost allocations associated with the CP method?**

342 A. Yes, but only if such modifications would be limited to the DS-5 class.

343 **Q. Please explain such modification?**

344 A. AIC could reduce the NCP demand of the DS-5 class by a certain amount, which would
345 greatly lower, but not completely eliminate, cost allocations of the primary distribution lines to
346 the DS-5 class.

347 **Q. By what magnitude of adjustment would AIC find reasonable?**

348 A. AIC would find it reasonable to accept one of two potential adjustments to the DS-5
349 class's NCP demand, in an event the Commission does not accept AIC's originally proposed
350 NCP method.

351 The first option would entail a 50% reduction of the DS-5 class's NCP demand, which
352 reduces the cost allocation of primary distribution lines by 50% of the amount under AIC's
353 originally proposed NCP method. Fifty percent correlates to the approximate number of hours in
354 a year that the lighting class operates at full load (daytime vs. nighttime hours in a day). A
355 second option would entail a 92.5% reduction of the DS-5 class's NCP demand, which would
356 reduce the cost allocations of primary distribution lines to the DS-5 class by an even greater
357 amount. Ninety two and one half of one percent correlates to the research related to the number
358 of primary distribution circuits that peak during winter or fall months.

359 Both options result in lower cost allocations of the primary distribution lines to the DS-5
360 class than proposed by the Company, but higher than zero. AIC could accept either one of these
361 two modifications for purposes of resolving this issue in this proceeding. AIC has offered these
362 two optional adjustments for consideration by the Commission, if the Commission favors neither
363 the CP method nor the NCP method, as offered up by the parties in this case.

364 **Q. What would be the benefit of a modified allocation method?**

A. It eliminates the negative cost allocation consequences of using the CP method, while recognizing the lower amount of “with-in” class load diversity inherent the DS-5 street lighting class as compared to other classes, as recognized by Mr. Rukosuev. This low “with-in” class load diversity appears to be one of Mr. Rukosuev’s biggest concerns as it relates to the DS-5 class. Both modified methods also recognize the fact that the DS-5 class uses primary distribution lines thus should bear some cost, which is a concern of the Company that the CP method failed to recognize. Either of the modified methods would ensure at least some amount of costs associated with primary distribution lines are allocated to the DS-5 class. This adjustment would also avoid the negative consequences associated with allocations of primary distribution line costs to the DS-6 class, which I will address in greater detail in the following section of my testimony.

ii. Concerns Specific to the New, Temperature Sensitive DS-6 Class

Q. Mr. Rukosuev states that the DS-5 class is similar to the DS-6. Do you agree with Mr. Rukosuev's analogy between the proposed DS-6 class and the DS-5 Street Lighting Class discussed above?

A. No. There is a fundamental difference between DS-5 lighting and DS-6 customers. DS-5 lighting consists of a large number of individual lighting devices with small individual demands dispersed throughout the system, while DS-6 class consists of much fewer customers, all of which will have a relatively large demand (only DS-3 or DS-4 customers can take service under the optional DS-6 rate). DS-6 customers can drive the annual primary distribution line peak demand, pushing the peak to occur in the fall. See Ameren Exhibit 8.1 where a single DS-6 customer is served from a local primary distribution line and undoubtedly causes a peak on the local facility to generally occur in the fall. The DS-5 class, while utilizing the primary

distribution lines and contributing to the peak demand on the local system, would not likely drive the local peak demand. Therefore, cost causation implies that the NCP method is even more important to use with regard to allocating primary distribution line costs to the DS-6 class. Mr. Rukosuev's misrepresentation of the system, and resulting recommendation, will give DS-6 customers unjustly reduced cost allocations that will be borne by other customers.

Q. Mr. Rukosuev states “to the extent that demands by the DS-6 rate class take place during fall off-peak periods, DS-6 rate class's contribution to the need for investments in primary lines and substations will be reduced.” (ICC Staff Ex. 4.0, p. 19.) How do you respond?

A. Mr. Rukosuev continues to inaccurately portray the issues and confuses matters by speaking generally of both substations and primary distribution lines, as if they were the same type of equipment and as if AIC's proposal is treating both components the same. While his statement may be true for some substations, his statement is not always true with respect to primary distribution lines. He goes on to say that the “Company's proposed NCP allocator would not recognize the benefits to the *system* of using more energy during off-peak periods”. (ICC Staff Ex. 4.0, p. 19 (emphasis added).) The system he is referring to in this passage is not primary distribution system, but rather the high voltage facilities, substations, and even the +100kV distribution lines. Mr. Rukosuev uses these true, but off-topic, statements about the highest levels of the distribution system to bolster his conclusion that CP method is a better method. This unsupported conclusion is based on facts about irrelevant facilities not the topic of discussion in the proceeding.

409 **Q. Do you agree that the DS-6 class is being "punished" under the NCP method as Mr.**
410 **Rukosuev argues?**

411 A. No. The customers that constitute the DS-6 class are receiving an overall decrease in cost
412 of service under the Company's proposal, even with the NCP method being used for allocation
413 of primary distribution lines.⁹ Further, the GFA has not voiced any concerns on this issue, and
414 AIC and GFA were able to agree to terms of the new temperature based rate, without regard to
415 the allocation method used for primary distribution lines. Even under the temperature sensitive
416 triggers, the primary distribution system must be designed to serve the fall peak loads of these
417 customers. Distribution planners will incorporate the temperature triggers into their planning,
418 but any system load reductions from this new rate will occur on substations and high voltage
419 facilities, *not* the local primary distribution line facilities. AIC's proposed NCP method for
420 primary distribution lines, in conjunction with the uncontested CP method for substations and
421 high voltage facilities most appropriately accommodates system load conditions on all levels of
422 the distribution system.

423 **Q. Is the fact that is unclear how many customers will switch to the new DS-6 class a**
424 **valid argument against adoption of NCP for said class?**

425 A. No. AIC fully expects customers to switch to DS-6. A review of the billing determinants
426 provided in this proceeding shows that many eligible customers will benefit under the new rate
427 structure. A concern about the specific number of customers that will ultimately take DS-6 does
428 not change the fact that local primary line circuits are built to serve local primary line demands,
429 of which are often set in the fall when DS-6 customer demands are the highest.

⁹ See Ameren Exhibit 2.3, row labeled "Rate Increase @ proposed ROR" and column labeled "DS-6 Temp. Sens. Service", for each respective rate zone

Q. Can you provide an example of the consequences of uses CP method to allocate the cost of primary distribution lines?

A. Yes. I will refer back to Ameren Exhibit 8.1, where the primary distribution line (extending towards the bottom/center of the exhibit) emanates from the “Main Street” substation and serves a DS-6 customer. The primary distribution line must be designed and constructed to meet the maximum demand on the line regardless of when it occurs. Assume that the maximum demand is 1,000 kW during the fall harvest, but only 100 kW during the system peak summer month. The demand of that customer during the single hour summer peak derived from the CP method would equal 100 kW rather than 1,000 kW, yet the primary line would need to be designed to carry at least 1,000 kW of capacity to meet the expected local primary distribution line peaks. Cost causation in this situation would indicate that the demand used to allocate the cost of primary distribution line to this customer should be the maximum fall peak demand (1,000 kW), not their summer CP demand (100 kW). If the primary distribution line was constructed just to meet the single hour system peak demand, then the primary distribution line would be inadequate to serve the customer when needed most, the fall harvest.

iii. Conflict with National Industry Practices

Q. Does Mr. Rukosuev disagree with your argument that the CP method conflicts with the way utilities in other jurisdictions allocate costs of primary distribution lines?

A. No. But he states that the proper focus should be on cost causation. I don't disagree, and I have focused the majority of my surrebuttal testimony on this principle. Even so, the fact that many other utilities have responded to survey stating that they allocate costs in the manner recommended by the Company suggests that those entities find the NCP method to be most consistent with the principles of cost causation, which is my, and Mr. Rukosuev's ultimate goal.

iv. Conflict with NARUC's Cost Allocation Manual

Q. Mr. Rukosuev references the introduction of the NARUC Manual, restating that the manual's objective is to be "simple enough to be used as a primer and to be non-judgmental; not advocating any one particular method but trying to include all [emphasis added] currently used methods with pros and cons". (ICC Staff Ex. 4.0, p. 23.) Mr. Rukosuev also points out that the manual states that individual customer maximum demands (Σ NCP) in addition to customer-class (NCP) demands are normally used in cost allocations for purposes of allocating the demand portion of distribution facilities. How do you respond?

A. I agree with his statement that the manual doesn't advocate one particular method, but I do point out that this section of the manual identifies only two specific methods that are normally used to allocate distribution plant: 1) NCP (customer class non-coincident demands, and 2) Σ NCP (individual customer maximum demands):

Distribution substations are designed to meet the maximum load from the distribution feeders emanating from the substation. Similarly, when designing primary and secondary distribution feeders, the distribution engineer ensures that sufficient conductor and transformer capacity is available to meet the customer's loads at the primary- and secondary distribution service levels. ... Consequently, customer-class non coincident demands (NCPs) and individual customer maximum demands are the load characteristics that are normally used to allocate the demand component of distribution facilities. ... The load diversity at distribution substations and primary feeders is usually high. For this reason, customer class peaks are normally used for the allocation of these facilities.

ICC Staff Ex. 4.0, p. 23.

The CP method, advocated by Mr. Rukosuev, isn't included. Mr. Rukosuev concludes that because the author doesn't include "NCP" in the concluding remarks on the topic, as done in the passage underlined above, that one is left to wonder whether customer classes' peaks are

481 coincident, non-coincident, or maximum class loads. I think a very plain English interpretation
482 of the underlined sentence above clearly provides the author's intent.

483 **Q. Didn't the author also state that Σ NCP's could also be used to allocate demand-**
484 **related distribution plant?**

485 A. Yes. Interestingly enough, if you would look back to Ameren Exhibit 8.1, the Σ NCP
486 actually contains the lowest level of load diversity in the load diversity /allocation factor
487 spectrum. In other words, the author appears to recommend a factor leaning towards the other
488 end of the spectrum than the CP method.

489 **Q. Mr. Rukosuev states "when reading other statements in the NARUC Manual, one**
490 **can find support for allocating distribution costs on the basis of energy usage and other**
491 **policies that would almost certainly not be supported by AIC. More importantly, the**
492 **manual discusses an allocation policy that is more complex, but very similar to allocation**
493 **on the basis of CP load." (ICC Staff Ex. 4.0, p. 24.) How do you respond?**

494 A. Mr. Rukosuev provided no references to the portions of the manual to which he is
495 referring, so it is difficult for me to address his remarks. I have reviewed the manual several
496 times and do not recall any such discussion as it related to primary distribution lines.

497 **Q. Mr. Rukosuev states that the NARUC Manual provides additional relevant and**
498 **meaningful information, particularly the idea of "simulating load profiles for various**
499 **classes of equipment on the distribution system". (ICC Staff Ex. 4.0, p. 24.) Do you agree?**

500 A. No. In fact, I find this reference irrelevant and not meaningful. The example explains a
501 hypothetical way of developing allocations to the rate classes, a similar idea to the one I describe
502 in my rebuttal testimony as the "better" allocation method to the traditional system level

allocation factors. Instead the example discusses line transformers, while the issue at hand is primary distribution lines. As stated before, this hypothetical allocation method is not available for use in this proceeding.

v. Conclusion

Q. Do you have any concluding remarks on the CP vs. NCP issue?

A. I continue to support the NCP method for purposes of allocating primary distribution lines because it is superior to the CP method proposed by Staff. The Company has provided substantial evidence that use of the CP method is flawed and inappropriate for purposes of allocating costs of primary distribution lines.

III. RESPONSE TO IIEC WITNESS STEPHENS

Q. Have you read the rebuttal testimony of Mr. Stephens, IIEC Exhibit 3.0?

A. Yes.

Q. To which issues do you respond?

A. I respond specifically to those portions pertaining to the allocation of primary distribution lines further discussed above and to IIEC's proposal that the Company separate of single/dual phase costs from three-phase costs of the primary distribution system.

A. CP vs. NCP

Q. Does Mr. Stephens support the Company's proposed use of the NCP method to allocate primary distribution lines?

A. Yes. Mr. Stephens affirms this support, and opposition to Staff, in his rebuttal testimony. He generally argues that the NCP demand is a better method for purposes of allocating primary distribution lines.

Q. How do you respond to Mr. Stephens' request for you to expand on the "better" allocation factor described in your rebuttal testimony?

A. Unfortunately, this “better” allocation method that I describe in hypothetical terms is impractical and perhaps impossible to develop given data currently available to AIC. As a result, I was not able to perform any additional analysis. But I don't consider the analysis necessary to demonstrate that an NCP method is more appropriate than the CP method, for the reasons stated above.

B. Assignment of Single-Phase Facility Costs to Secondary Voltage Customers

Q. Can you please provide a small amount of initial background on this issue?

A. Yes. Mr. Stephens makes two proposals related to the issue of separation of single/dual phase costs from three-phase costs of the primary distribution system. Mr. Stephens' first proposal requests that the Commission direct the Company and all interested parties to review the merit of separating, for purposes of class cost allocation, primary distribution line costs into the two categories: 1) single-phase circuits and 2) three-phase circuits. His second proposal would modify the ECOSS by separating primary distribution line costs into the two categories mentioned above, and allocating the single-phase portion exclusively to the secondary function. This issue essentially presents two questions: (1) Should the parties conduct future workshops on this topic; and (2) should the Commission immediately assign 10% to 20% of the Primary Distribution system costs to the secondary function, in recognition that single-phase facilities are primarily used to serve secondary customers.

Q. Has Mr. Stephens provided any additional clarification around his first proposal?

546 A. Yes. Mr. Stephens proposes two phases to his first proposal 1) to review the merit of the
547 having an investigation, and 2) if it is decided that an investigation would be appropriate, how to
548 quantify and segregate any costs of single phase primary distribution lines. The first phase
549 would include both Ameren and ComEd, while the second phase would be conducted
550 independently.

551 **Q. What is AIC's response to this clarification around Mr. Stephens first proposal?**

552 A. AIC takes no position with the issues of an investigation and is not advocating that such
553 an investigation is appropriate or not. However, if the Commission decided such an
554 investigation should occur, AIC would not object to Mr. Stephens' clarification and suggestion to
555 conduct his first proposal in the two phases as described above. It is my understanding that the
556 Commission will rule upon Mr. Stephens' workshop proposal in Docket 13-0387, before it issues
557 a final order in this proceeding. Assuming the Commission rejects Mr. Stephens' proposal in
558 Docket 13-0387, that would resolve the issue in both proceedings, since it would eliminate Mr.
559 Stephens' first phase.

560 **Q. What is AIC's position in regards to Mr. Stephens second proposal, to immediately**
561 **assign 10-20% of the primary distribution line costs to the secondary customers?**

562 A. AIC is still reluctant to support a 10-20% adjustment to primary line costs as proposed by
563 IIEC, for the reasons discussed below.

564 **Q. Mr. Stephens states that it is not his responsibility to provide an estimate of an**
565 **offsetting portion of a three-phase primary distribution line costs that should be assigned**
566 **only to customers that take service at primary voltage. How do you respond?**

A. It is also not AIC's responsibility to advocate or provide support for a proposal it is not recommending be adopted. The primary distribution system is complex and deconstructing costs might not be practical. The unknown facts purportedly driving Mr. Stephens' proposal should cause the Commission to exercise caution in approving any immediate adjustment based on Mr. Stephens' recommendation in this proceeding. The record simply does not contain a factual basis for any specific percentages Mr. Stevens recommends. If the Commission decides there is merit in conducting an investigation, then analysis resulting from such investigation might be useful in determining an appropriate percentage of cost, if any, that should be allocated to secondary customers.

Q. Do you have any other concerns with making the single phase adjustment in this proceeding as IIEC has proposed?

A. Yes. Mr. Stephens' proposal doesn't explain how class demand allocators should be modified from those existing in the proceeding. The Company doesn't currently have class demands segregated by single phase and three phase, as would be required for such adjustment. As Mr. Stephens points out, DS-3 and DS-4 classes have little demand connected to single-phase circuits; however, the DS-2 class has both single and three phase customers of unknown magnitudes. AIC doesn't have the class demands for each of these categories of DS-2 customers, nor have any estimates been provided in this proceeding. In order to accurately allocate costs of single-phase and three-phase primary facilities as proposed by IIEC, additional analysis of class demands should to be developed. Examples of these categories would be DS-1 single phase, DS-1 dual-phase, DS-1 three-phase, DS-2 single-phase, DS-2 dual-phase, DS-2 three-phase, etc. Simply stating that these single phase primary distribution line costs should be allocated to the "secondary" customers isn't quite as simple or straightforward, as Mr. Stephens

describes. While Mr. Stephens' proposal presents interesting ideas, the proposal is still incomplete and could result in inaccurate allocations of costs amongst the DS-1 and DS-2 classes, even though the proposal would effectively remove costs from the DS-3 and DS-4 classes.

Q. In response to points raised in your rebuttal testimony, Mr. Stevens again cited the pending "rate redesign" case of ComEd, docketed as Docket 13-0387. What is the relevance of that docket for this issue?

A. The relevance of Docket 13-0387 to Mr. Stephens' second proposal is similar to the relevance of this docket to his first proposal. Assuming that the record and arguments presented in both dockets are substantially similar, the rejection of Mr. Stephens' 10-20% proposal in Docket 13-0387 would effectively resolve the appropriateness of this same adjustment in this proceeding.

IV. RESPONSE TO IIEC WITNESS ALDERSON

Q. Have you read the rebuttal testimony of IIEC witness Ms. Alderson, IIEC Exhibit 4.0?

A. Yes.

Q. Does Ms. Alderson continue to harbor concerns about AIC's use of the CUST370A allocator?

A. No. Based on her review of the additional explanation I provided in rebuttal testimony, Ms. Alderson no longer has concerns and describes the factor as appropriate. I no longer view this issue to represent a contested issue.

611 V. **REPLY TO AG WITNESS MR. SCOTT J. RUBIN**

612 Q. **Have you read the rebuttal testimony of AG witness Mr. Rubin, AG Exhibit 2.0?**

613 A. Yes.

614 Q. **To which issues raised therein do you wish to respond?**

615 A. I will be responding to Mr. Rubin's rebuttal testimony on the allocation of specific
616 General and Intangible (G&) plant assets—the communications network and Informational
617 Technology (IT) hardware and software assets that will be placed in service in connection with
618 the approved Advanced Metering Infrastructure (AMI) Plan. As Mr. Rubin makes clear, the
619 contested issue here, which I also addressed in my rebuttal, is whether AIC should allocate these
620 specific G&I plant costs to its customer classes, using a labor allocator (as proposed by Mr.
621 Rubin), or a customer-related allocator (as originally proposed by AIC).

622 Q. **After reviewing Mr. Rubin's rebuttal testimony, does AIC intend to change its**
623 **proposed allocation of the capital costs of the AMI communications network and IT assets?**

624 A. No.

625 Q. **Please restate why AIC proposes to allocate AMI communication network and IT**
626 **assets, using a customer-related allocator (CUST370).**

627 A. As I stated in my direct and rebuttal testimony, AIC considered a customer-related
628 allocator appropriate for the communication network and IT assets, because it is the same
629 allocator that AIC will use to allocate the AMI meter costs. AIC believes that the cost allocation
630 for the communication network and IT assets should follow the cost allocation of the AMI
631 meters (cost causation principle), since the communications network and IT plant assets are
632 necessary for the AMI meters to be fully functional.

633 **Q. In your prior testimony, you also stated that a customer allocator was appropriate**
634 **for the AMI communications network and IT assets, since the AMI network would replace**
635 **manual meter readers. Why is that functionality of the AMI network important?**

636 A. As I explained in my prior testimony, AIC believes that the meter reading functionality of
637 the AMI network further supports the use of a customer –related allocator, since AIC currently
638 allocates meter reading expense using a customer-related allocator.

639 **Q. Mr. Rubin agrees that the AMI communication network and IT assets are necessary**
640 **for the AMI meters to be fully functional. But he claims that there are various functions**
641 **performed by the AMI infrastructure that support the use of a labor allocator. What are**
642 **those other functions?**

643 A. In lines 239-242 of his rebuttal testimony, Mr. Rubin identifies several functions, other
644 than meter reading, that he believes the AMI network will perform. These other functions are:
645 outage management and response, uncollectible accounts, service disconnection and
646 reconnection, energy efficiency.

647 **Q. Do these other functions of the AMI network support Mr. Rubin’s proposal for a**
648 **labor allocator?**

649 A. No. All components of the AMI network—the meters, the communications network and
650 the IT assets—are necessary to perform any of these functions. In other words, the
651 communications network and the IT assets are needed for the meters to function as designed.
652 This is why AIC considers the AMI communication network and IT assets to be an extension of
653 the AMI meters, and not analogous to other types of general plant. Given that reality, AIC does

654 not believe that it is appropriate to treat the components separately and differently for cost
655 allocation purposes.

656 **Q. Mr. Rubin states that you have not performed a functionalization analysis to**
657 **determine the appropriate categories in which AMI-related communications network and**
658 **IT assets should be placed. Is that functionalization analysis necessary for these assets?**

659 A. No. It is not necessary to perform a functionalization analysis for these specific G&I
660 assets, given the interplay between the AMI meters, communication network, and IT assets.
661 That fact that one component of the AMI network (e.g., the meters) cannot perform any of the
662 identified functions without the other two components makes these specific G&I assets not
663 analogous to the utility's office building example in Mr. Rubin's testimony. In that example,
664 whether a specific area in an office building can perform its day-to-day functions does not hinge
665 entirely upon the functionality of the other specific areas in the same building. But in the case of
666 the AMI network, the functionality of the meters is entirely dependent upon the functionality of
667 the other associated assets.

668 **Q. Mr. Rubin also states that you have not performed a cost allocation analysis that**
669 **compares the projected AMI costs and benefits for each customer class. Why not?**

670 A. In my opinion, the focus should be on the cause of the capital costs that AIC will be
671 incurring in the next several years, not the estimated benefits that AIC projected to materialize
672 over the next 20 years. In this instance, you cannot have a fully functional AMI meter, without
673 the communications network and the IT assets. Thus, for each component of the AMI network,
674 the cost causer is the end user of the meter, the customer. Given the interplay between the

various components of the AMI network, there is no need to delve into a theoretical debate about the percentage of projected benefits that each customer class will receive over the next 20 years.

Q. Do you have any comments on the analysis that Mr. Rubin prepared in AG Exhibit 2.2 (his response to data request AIC-AG 1.04)?

A. Yes. My comments are limited to the observation that his analysis is driven by his designation of a “function” for the projected costs and benefits of the AMI Plan (e.g., meter, general, customer and uncollectible). These designations again overlook the practical problem that these functions require all three components of the AMI network to be fully operational. Since Mr. Rubin agrees that AIC should use a customer-related allocator to allocate the capital costs of the AMI meters, it does not make sense to use a different allocator for the other components.

VI. RESPONSE TO GFA WITNESS ADKISSON

Q. Have you read the rebuttal testimony of GFA witness Mr. Adkisson, GFA Exhibit 2.0?

A. Yes.

Q. Does that testimony confirm the agreement with the GFA described in your rebuttal testimony and related to the creation of the new, temperature-sensitive DS-6 class?

A. Yes, it does. It confirms the compromise reflected in Ameren Ex. 5.5. Given this testimony (and the underlying agreement) and testimony presented on the topic by Staff witness Ms. Harden (see ICC Staff Ex. 5.0, p. 3 (“recommend[ing] approval of Ameren’s proposal to establish a DS-6 Temperature Sensitive Delivery Service subject to the changes shown in

696 Ameren Exhibit 5.5)), I believe creation of a new class predicated on the terms and conditions
697 contained in Ameren Ex. 5.5 is no longer contested amongst the parties.

698 **VII. CONCLUSION**

699 **Q. Does this conclude your surrebuttal testimony?**

700 **A. Yes, it does.**